

**PHASE CONTINUOUS SYNTHESIZER WITH PHASE COASTING AND
ASSOCIATED METHODS**

Abstract of the Disclosure

The phase continuous synthesizer and method generate a relatively wideband swept frequency signal with the use of a first generator for generating a first swept frequency signal, and a second generator successively switching between different frequency signals while creating undesired phase discontinuities during switching. A mixer is connected to the first and second generators for mixing the first swept frequency signal and the successively switched different frequency signals to produce the relatively wideband swept frequency signal, and a phase coasting unit is connected downstream of the mixer to reduce the undesired phase discontinuities created during switching in the relatively wideband swept frequency signal.